

REMARKS

Claims 1, 3–12, 15, and 17–34 are pending in the application. Applicants note with thanks the Examiner’s allowance of claims 22, 23, and 27–34.

Claim Rejections Under 35 U.S.C. § 103(a)

Claim Rejections Over Miller in View of Wilbur

Claims 1, 5, 6, 15, 17–19, 24, and 25 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 4,643,260 (“Miller”) in view of U.S. Patent No. 903,527 (“Wilbur”).

Applicants respectfully submit that amended claim 1 is distinguishable from the cited references. Claim 1 recites:

1. A method for preventing freezing at an outlet of a fire extinguisher, wherein said fire extinguisher contains fire extinguisher fluid, said method comprising:

providing a container with a drying agent therein, the container having walls with a plurality of openings therein sized to confine the drying agent in the container but to permit fire extinguisher fluid to enter the container;

inserting said container into a fire extinguisher bottle with the container remaining unattached to the bottle so that it is readily removable;

spacing the container from said outlet to ensure that the container does not clog the outlet; and

introducing fire extinguisher fluid into the bottle and immediately into contact with the drying agent to remove water from the fluid, wherein the fire extinguisher fluid in the bottle contacts the drying agent substantially continuously.

The support for the amendment is found throughout the specification and drawings.

Applicants respectfully submit that neither Miller nor Wilbur provide any motivation to position the container of drying agent within the fire extinguisher bottle or that the fire extinguisher fluid contacts with the drying agent substantially continuously. The Examiner states that “Miller teaches all of the limitations except for the drying agent that comes in contact with the fire extinguisher fluid inside the fire extinguisher bottle.” Miller discloses a filter/dryer 50 that is external of the fire extinguisher bottle (Fig. 2). The Halon does not contact the drying agent until discharged. Miller states that the filter/dryer “absorb[s] the small amount of water

content found in the commercial grade of Halon. The elimination of water from Halon prior to nozzle discharge is essential to prevent nozzle plugging by water freeze-up.” Col. 5, ll. 1–5. Consequently, Miller teaches that an external filter/dryer 50 adequately prevents water freeze-up in the nozzles and provides no motivation to position the filter/dryer within the fire extinguisher bottle.

Similarly, Wilbur does not provide any motivation to position the drying agent disclosed in Miller within the fire extinguisher bottle also disclosed in Miller. The Examiner states that “Wilbur discloses a fire extinguisher bottle 24 with a wire mesh container 12 within a removable container 2 (figure 2). The fire extinguisher fluid within the container 24 comes in contact with the powder material contained within the wire mesh container 12 before exiting out through conduit 46 (figure 1).” In the apparatus disclosed in Wilbur, the fire extinguisher fluid contained in tank 24 never contacts the wire mesh container 12. In fact, the apparatus is equipped with “an outwardly opening and an inwardly closing valve 26 (to prevent entrance of liquid from the tank).” 4:8–10. That is, the water held in the upper portion of the gas generator container 2 is used only in gas generation and not a fire extinguisher fluid. Consequently, the wire mesh container 12 does not even contact the fire extinguishing fluid, thereby not providing any motivation to place the drying agent in the present claim inside the bottle. Moreover, the even if this water were a fire extinguishing fluid, does not contact the contents of the wire mesh container 12 substantially continuously.

For all of these reasons, Applicants respectfully submit that the Examiner’s rejection is overcome and that claim 1 is allowable over the cited references. Because claims 5 and 6 are dependent on claim 1 and recite additional patentable features, Applicants respectfully submit that claim 5 and 6 are also allowable over the cited references.

Amended claim 15 also recites that the container of drying agent is positioned within the fire extinguisher bottle and that the fire extinguisher fluid is in substantially continuous contact with the drying agent. Accordingly for the same reasons as for claim 1, Applicants respectfully submit that Examiner’s rejection of claim 15 and dependent claims 17–19, 24, and 25 are overcome.

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Amendment dated April 2, 2004

Reply to Office Action of December 2, 2003

Claim Rejections Over Miller in View of Wilber and Birk.

Claims 3, 8, and 9 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Miller in view of Wilber, and further in view of U.S. Patent No. 5,845,716 (“Birk”).

Claims 3, 8, and 9 are dependent on claim 1. For the reasons provided above, Applicants respectfully submit that claim 1 is patentable over Miller in view of Wilber. The Examiner cites Birk as disclosing bromotrifluoromethane or a halocarbon fire extinguisher fluid. Birk does not disclose or suggest placing the drying agent within the bottle or contacting the fire extinguisher fluid with the drying agent substantially continuously. Because claim 1 is patentable over the cited references and because claims 3, 8, and 9 recite additional patentable features, Applicants respectfully submit that the rejection of claims 3, 8, and 9 are overcome.

Claim Rejections Over Miller in View of Wilbur and Tsuchiya.

Claim 4 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Miller in view of Wilbur, and further in view of EPO Publication No. EP 0 974 633 A1 (“Tsuchiya”).

Claim 4 is dependent on claim 1. For the reasons provided above, Applicants respectfully submit that claim 1 is patentable over Miller in view of Wilbur. The Examiner cites Tsuchiya as disclosing the use of zeolites as drying agents. Tsuchiya does not disclose or suggest placing the drying agent within the bottle or contacting the fire extinguisher fluid with the drying agent substantially continuously. Because claim 1 is patentable over the cited references and because claim 4 recites additional patentable features, Applicants respectfully submit that the rejection of claim 4 is overcome.

Claim Rejections Over Miller in View of Wilbur.

Claims 7 and 10 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Miller in view of Wilbur.

Claims 7 and 10 are dependent on claim 1. For the reasons provided above, Applicants respectfully submit that claim 1 is patentable over Miller in view of Wilbur. With respect to claim 7, the Examiner states that it would have been obvious to one skilled in the art to contact the fire extinguisher fluid with the drying agent for at least 2 days. With respect to claim 10, the Examiner states that it would have been obvious to one skilled in the art to reduce the water content in the fire extinguisher fluid to less than 40 ppm. Applicants note that Millar does not disclose or suggest that the contact time disclosed therein is insufficient to prevent freezing at the

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nozzle, and that Wilbur does not address freezing at the nozzle or water contamination of the extinguisher fluid at all. Because claim 1 is allowable over the cited references and because claims 7 and 10 recite additional patentable features, Applicants respectfully submit that the rejections of claim 7 and 10 are overcome.

Claim Rejections Over Miller in View of Wilbur and Drobyshev.

Claims 11 and 12 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Miller in view of Wilbur, and further in view of Drobyshev.

Claims 11 and 12 are dependent on claim 1. For the reasons provided above, Applicants respectfully submit that claim 1 is patentable over Miller in view of Wilbur. The Examiner cites Drobyshev as disclosing granules, blocks, or bars of zeolite a drying agents for a fire extinguisher. Drobyshev does not disclose or suggest placing the drying agent within the bottle or contacting the fire extinguisher fluid with the drying agent substantially continuously. Consequently, because claim 1 is patentable over the cited art and because claims 11 and 12 recite additional patentable features, Applicants respectfully submit that the rejection of claims 11 and 12 are overcome. Furthermore, Applicants further note that Drobyshev discloses the use of zeolites as solid fire extinguishants, not as drying agents.

Claim Rejections Over Miller in View of Wilbur.

Claims 20 and 21 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Miller in view of Wilbur.

Claims 20 and 21 are dependent on claim 15. For the reasons provided above, Applicants respectfully submit that claim 15 is patentable over Miller in view of Wilbur. Because claim 15 is patentable over the cited references and because claims 20 and 21 recite additional patentable features, Applicants respectfully submit that the rejections of claims 20 and 21 are overcome.

Claim Rejections Over Miller in View of Wilbur.

Claim 26 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Miller in view of Wilbur.

Claim 26 is dependent on claim 15. For the reasons provided above, Applicants respectfully submit that claim 15 is patentable over Miller in view of Wilbur. Because claim 15 is patentable over the cited references and because claims 20 and 21 recite additional patentable features, Applicants respectfully submit that the rejection of claim 26 is overcome.

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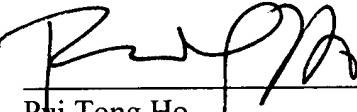
Respectfully submitted,

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